

**PHYSEOPARDY**

Work &  
Energy

Fill in  
The \_\_\_\_\_

Power

Momentum

Solving  
Problems

\$100

\$100

\$100

\$100

\$100

\$200

\$200

\$200

\$200

\$200

\$300

\$300

\$300

\$300

\$300

\$400

\$400

\$400

\$400

\$400

\$500

\$500

\$500

\$500

\$500

You have selected an area of the board not in play.

OOPS!

[Click here to go back to the main board](#)

# Work & Energy - \$100

Energy is changed from one form to another with no net loss or gain.

- a. Sometimes true
- b. Always false
- c. Always true

ANSWER

## Work & Energy - \$200

If you lift two loads up one story, how much work do you do compared to lifting just one load up one story?

- a. One quarter as much
- b. One half as much
- c. The same amount
- d. Twice as much
- e. Four times as much

ANSWER

# Work & Energy - \$300

As a pendulum swings back and forth

- a. at the end points of its swing, its energy is all potential.
- b. at the lowest part of its swing, it has the most kinetic energy.
- c. kinetic energy is transformed into potential energy.
- d. potential energy is transformed into kinetic energy.
- e. all of the above

ANSWER

# Work & Energy - \$400

When baking soda is added to citric acid, the temperature of the mixture decreases. This is an example of what kind of energy conversion?

- a. Chemical potential to kinetic
- b. Thermal to chemical potential
- c. Elastic potential to thermal
- d. Kinetic to elastic potential

ANSWER

## Work & Energy - \$500

Leslie let go of an inflated balloon and it went flying sideways across the room. When she let it go, did Leslie do (physics) work on the balloon?

- a. Yes because the balloon moved.
- b. Yes because her force caused a displacement.
- c. No because letting go was not the direct cause of the displacement.
- d. No because the balloon went sideways instead of up or down.

ANSWER



*Fill in the \_\_\_\_\_ - \$100*

Work is when a \_\_\_\_\_  
causes a \_\_\_\_\_.

ANSWER

*Fill in the \_\_\_\_\_ - \$200*

Energy is the \_\_\_\_\_ to do  
\_\_\_\_\_.

ANSWER

*Fill in the \_\_\_\_\_ - \$300*

Power is \_\_\_\_\_ over \_\_\_\_\_.

ANSWER

*Fill in the \_\_\_\_\_ - \$400*

Momentum is \_\_\_\_\_ in \_\_\_\_\_ .

ANSWER

*Fill in the \_\_\_\_\_ - \$500*

Conservation means the total energy (or momentum) \_\_\_\_\_.

ANSWER

# Power - \$100

What is the metric system unit of measurement for power?

ANSWER

## Power - \$200

How long would Leslie need to ride a bike to use up the energy in a 300 Calorie hamburger?

- a. A few minutes
- b. 20-60 minutes
- c. Several hours

ANSWER

# Power - \$300

Which used more power?

- a. Riding the exercise bicycle
- b. Doing 10 curls.
- c. They were about the same.

ANSWER



## Power - \$400

A job is done slowly, and an identical job is done quickly. Both jobs require the same amount of work but different amounts of

- a. energy.
- b. power.
- c. both A and B
- d. none of the above

ANSWER

## Power - \$500

Joe (average build) made it up a flight of stairs 1.7 m high in 0.9 seconds. About how many horsepower is that?

- a. about 0.15 hp
- b. about 1.5 hp
- c. about 15 hp
- d. about 150 hp

ANSWER

# Momentum - \$100

Compared to a sports car moving at 30 miles per hour, the same sports car moving at 60 miles per hour has

- a. twice as much momentum.
- b. four times as much momentum.
- c. the same momentum.

ANSWER

# Momentum - \$200

Due to conservation of momentum, when a small ball was placed on top of a basketball and then the two were dropped, the small ball...

- A. did not bounce up as much just the basketball
- B. bounced up about the same
- C. bounced higher than just the basketball

ANSWER

# Momentum - \$300

Mountain climbers use nylon rope that will stretch because if they fall the stretching means:

- a. More time to stop
- b. Less force to stop
- c. More work done to stop
- d. Both a & b
- e. None of the above

ANSWER

# Momentum - \$400

In order to increase the final momentum of a golf ball, we could

- a. increase the force acting on it.
- b. follow through when hitting the ball.
- c. increase the time of contact with the ball.
- d. swing as hard as possible.
- e. all of the above

ANSWER

# Momentum - \$500

Which of the following has the largest momentum?

- a. A large truck parked in a parking lot
- b. A tightrope walker crossing Niagara Falls
- c. The science building at your school
- d. A pickup truck traveling down the highway
- e. A dog running down the street

ANSWER

## Solving Problems - \$100

How much power is required to do 50 J of work on an object in 5 seconds?

ANSWER



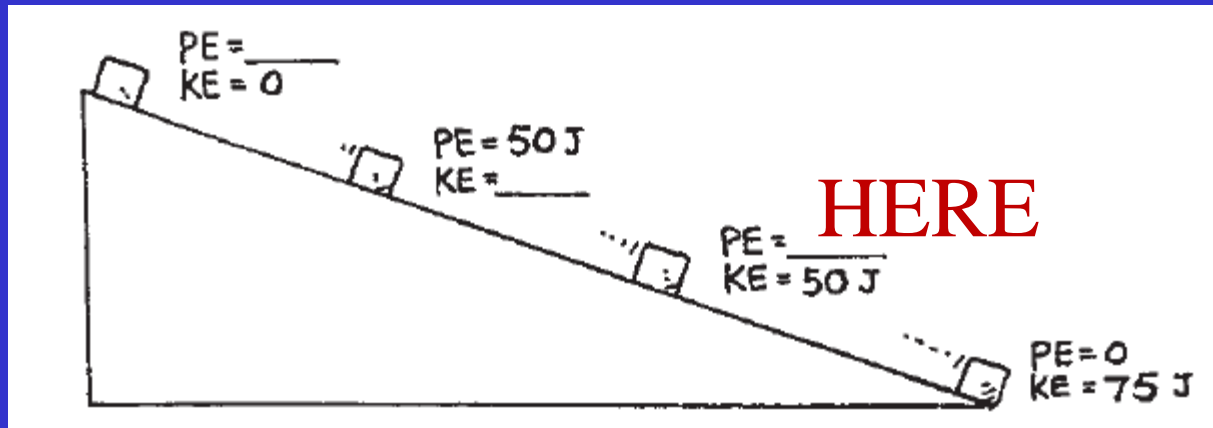
## Solving Problems - \$200

Which requires more work: lifting a 80-kg sack vertically 2 meters or lifting 40-kg sack vertically 4 meters?

- a. Lifting the 80-kg sack
- b. Lifting the 40-kg sack
- c. Both require the same amount of work.

ANSWER

# Solving Problems - \$300



How much potential energy does the block have at the spot marked “HERE”?

ANSWER

## Solving Problems - \$400

A ball is moving at 4 m/s and has a momentum of 12 kg\*m/s. What is the ball's mass?

ANSWER

## Solving Problems - \$500

How much power is expended if you lift a 80 N crate 10 m in 2 seconds?

ANSWER

\*\*\*\**Answers*\*\*\*\*

# Work & Energy - \$100

Energy is changed from one form to another with no net loss or gain.

- a. Sometimes true
- b. Always false
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DONE

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DONE

*Fill in the \_\_\_\_\_ - \$100*

**“force”**

**“displacement”**

DONE

*Fill in the \_\_\_\_\_ - \$200*

**“ability”**

**“work”**

DONE

*Fill in the \_\_\_\_\_ - \$300*

**“work”**

**“time”**

DONE

*Fill in the \_\_\_\_\_ - \$400*

**“inertia”**

**“motion”**

DONE

*Fill in the \_\_\_\_\_ - \$500*

**“stays the same”**

**“ is always equal”**

DONE

Power - *\$100*

Watts (W)

DONE



## Power - \$200

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- c. The science building at your school
- d. A pickup truck traveling down the highway**
- e. A dog running down the street

DONE

## Solving Problems - \$100

$$\begin{aligned} P &= W/t \\ &= 50 \text{ J} / 5 \text{ s} \\ &= 10 \text{ W} \end{aligned}$$

DONE

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Which requires more work: lifting a 80-kg sack vertically 2 meters or lifting 40-kg sack vertically 4 meters?

- a. Lifting the 80-kg sack
- b. Lifting the 40-kg sack
- c. **Both require the same amount of work.**

DONE

# Solving Problems - *\$300*

25 J

DONE

## Solving Problems - \$400

$$\begin{aligned} m &= \text{mom.} / v \\ &= 12 \text{ kgm/s} / 4 \text{ m/s} \\ &= 3 \text{ kg} \end{aligned}$$

DONE

## Solving Problems - \$500

$$P = W/t$$

$$= F*d/t$$

$$= 80 \text{ N} * 10 \text{ m} / 2\text{s}$$

$$= \mathbf{400 \text{ W}}$$

DONE

**DAILY  
DOUBLE**

CONTINUE

**DAILY  
DOUBLE**

CONTINUE



# Final Jeopardy

The Names of the Both Vice-Presidential Candidates.

Answer



# Final Jeopardy

# Election: 2008

Continue

# Final Jeopardy

Answer

Question:

Who are Gov. Sarah  
Palin and Sen.  
Joseph Biden, Jr.

# Directions for Changing the Game

- To change the questions and answers, just type over the problems...Use the “replace” feature to change the categories easily
- The daily doubles were originally set to category #4 for \$500 and category #2 for \$300
- To change the daily doubles you must
  - 1. Change the hyperlink for the links on the main board to go to the appropriate question, therefore bypassing the daily double slide
  - 2. Change the hyperlink on the continue button on each daily double slide to go to the new question.